L 56066-65
ACCESSION NR: AP5018556 UR/0020/64/158/004/0892/0895

AUTHOR: Yelyakov, G. B.; Strigina, L. I.; Kochetkov, N. K. (Corresponding member AN SSSR)

TITLE: Structure of the aglycone panacoside A

SOURCE: AN SSSR. Doklady, v. 158, no. 4, 1964, 892-895

TOPIC TAGS: glycoside, hydrolysis, alcohol

Abstract: The article represents the fifth report from a series on glycosides from ginseng roots. Six individual glycosides have been isolated from ginseng: the panacosides A, B, C, D, E, and F. Mild hydrolysis of panacoside A (0.1 N aqueous-methanolic HCl, 65°) produced the splitting out of glucose and the formation of two different progenins; under more rigorous conditions (20% aqeous-methanolic HCl, 65°) a complex mixture of hydrolysis products was formed, consisting of six genins: A_1, A_2, A3, A_4, A_5 and A_6 (in order of decreasing polarity), existing in equilibrium, with a predominance of the least polar genin A_6. Under even more rigorous hydrolysis (80°), the genin A_6 and even less polar products of further decomposition are formed, which are the only hydrolysis products at 100°. The panacosides B and C, as well as a mixture of panacosides A, B, and C, given an identical result, indicating that

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they possess the same or similar aglycones. The data of the authors and literature data on a study of the hydrolysis products through elementary analysis, thin-layer chromatography, infrared, ultraviolet, and nuclear magnetic resonance spectra, as well as preliminary data on the mass spectra of genin A_6, indicate that the panacoside A, as well as panacosides B and C, are glycosides of a polycyclic alcohol or structurally similar alcohols, containing a system of readily hydrated multiple bonds. Orig. art. has 4 formulas.

ASSOCIATION: Dal'nevostochnyy institut biologicheski aktivnykh veshcheatv Sibirskogo otdeleniya Akademii nauk SSSR (Far-Eastern Institute of Biologically Active Substances, Siberian Department of the Academy of Sciences SSSR); Institut khimii prirodnykh soyedineniy Akademii nauk SSSR (Institute of the Chemistry of Natural Compounds, Academy of Sciences SSSR)

SUBMITTED: 26May64 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 002 OTHER: 002 JPRS

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YELYAKOV, G.B.; STRIGINA, L.I.; KOCHETKOV, N.K.

Structure of panaxoside A aglycon. Dokl. AN SSSR 158 no.4:892-895 O '64. (MIRA 17:11)

1. Dal'nevostochnyy institut biologicheski aktivnykh veshchestv Sibirskogo otdeleniya AN SSSR i Institut khimii prirodnykh soyedineniy AN SSSR. 2. Chlen-korrespondent AN SSSR (for Kochetkov).

STRIGINA, L.R.; LAVRENT'YEV, K.G.; BRESHCHENKO, Ye.M.

Increasing the wear resistance of a granulated refractory clay used as a heat carrier. Nefteper. i neftekhim. no. 11:13-15 '63. (MIRA 17:5)

1. Groznenskiy neftyanoy nauchno-issledovatel'skiy institut.

BRESCHCHENKO, Ye.M.; AMERIK, B.K.; STRIGINA, L.R.; BOLDYREVA, T.A.; POL'YANOVICH, G.A.

Selecting a heat carrier for the contact pyrolysis of gases and gasoline fractions. Trudy GrozNII no. 15:176-186 '63. (MIRA 17:5)

PODOBED, N.D.; KOZHEVNIKOVA, Ye.S.; STRIGINA, L.V.

Theory of phototurbidimetric analysis; study by the method of light extinction of suspensions of calcium oxalate, silver iodide and ferrocyanide in the presence of an excess of precipitating agents and mineral acids. Izv.vys.uch.zav.; khim.i khim.tekh. 5 no.4:544-548 '62. (MIRA 15:12)

1. Volgogradskiy mekhanicheskiy institut, kafedra khimii.
(Chemistry, Analytical)
(Turbidity)

STRIGINA, Ye. A.

"Chemical Composition of Hard Tissues in Different Areas of the Root of the Tooth in Cases of Pyorrhea Alveolaris and Its Clinical Varieties." Sub 19 Mar 51, Moscow Medical Stomatological Inst, Ministry of Health RSFSR.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

STRIGO, Yu.S., otv. red.

[Descriptive geometry and engineering drawing in the manufacture of machinery; transactions] Nachertatel'naia geometriia i inzhenernaia grafika v mashinostroenii; trudy. Omsk, 1963. 80 p. (MIRA 17:5)

1. Omsk. Mashinostroitel'nyy institut. Kafedra nachertatel'noy geometrii i chercheniya.

STRIGOTSKIY, M.,gvardii mayor; VOROTNIKOV, M.,polkovnik

Drill-and-tactics exercises with tank units; from experience.
Voen.vest. 38 no.11:38-44 N '58. (MIRA 11:12)
(Tank warfare)

L 07553-67 EWT(1)
ACC NR: AP6013411 (A) SOURCE CODE: UR/0018/65/000/012/0099/0103

AUTHOR: Maloletnev, N. (Colonel); Strigotskiy, M. (Lt. Col.)

ORG: none

TITLE: Let us improve the firing training of military tank crews

SOURCE: Voyennyy vestnik, no. 12, 1965, 99-103

TOPIC TAGS: gunnery training, military tank, military personnel

ABSTRACT: This article presents one of the versions of organizing and conducting tank firing training. Tank firing training is conducted systematically two times a week for two hours each. As a rule the exercises are organized at three training sites by platoons. At the first training site the students acquire basic skills in firing, for which purpose conditions are created which are as close as possible to actual firing from tanks. The second training site is intended for training in reconnaissance of targets by observation, determination of distances, and presenting target designation. At this training site there are mobile and pop-up targets as well as camouflaged fixed targets at ranges from 800 to 2000 m. In the observation sector of each crew there are five or six different targets. The members of the crews, observing the battlefield through instruments, study the terrain, seek out the targets, determine the range to them, and present target designations. At the third site training is in the use of firing rules and in the solution of firing problems. The

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L 07553-67

ACC NR: AP6013411

studies are conducted by practical firing of small-caliber cartridges at various targets set up on electrified miniature firing grounds. The author concludes that this version of the organization of tank firing training in a company is not necessarily a pattern to be followed by other companies since methods of conducting training exercises and the subject matter of the training problems must be determined each time depending upon the specific conditions and tasks performed by the units. Orig. art. has: 2 figures.

SUB CODE: 15,05/ SUBM DATE: none

Card 2/2 nst

44561
S/020/63/148/001/020/032
B144/B186

AUTHORS: Vartanyan, L. S., Strigun, L. M., Emanuel', N. M., Corresponding Member AS USSR

TITLE: Kinetics of propylgallate autooxidation in aqueous solution

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 148, no. 1, 1963, 97-100

TEXT: The course of the oxidation of propyl gallate (PG) which has an antitumor and radiation-protective effect was determined polarographically in a borate buffer of pH 7.2 - 7.4 at a constant temperature of 21°C. Consistently with data published on PG in acetate buffer, the half-wave potential depended linearly on the pH of the medium within the pH range 7.1 - 8.6. The PG oxidation rate increased with increasing pH and showed a linear dependence on the OH^- ion concentration, which indicates that PG ions with a single charge react. The reaction is first-order with respect to the initial PG concentration. Moreover a zero-order reaction with respect to the process concentration was found, which may be explained by intermediate formation of quinone. This is converted with an increasing rate to semiquinone by reacting with PG. The temperature

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dependence of the oxidation rate was studied at pH 7.6 and 8.8. The activation energy derived from these data was 18000 ± 700 cal/mole and is attributed to the ionized semiquinone molecule. A steep wave with a half-wave potential of 1.17 v was detected polarographically in the PG oxidate (buffer pH 7.2). By separate tests it was proved that this wave is due to the presence of H_2O_2, and this was identified also by the qualitative reaction with (TiO_2 + H_2SO_4). The presence of further oxidation products resulted from the 0.03 v difference between the half-wave potentials of H_2O_2 and the PG oxidate. A complete scheme of PG oxidation in aqueous solution is given. The formation of free-radical intermediate products may explain the different behavior of phenol inhibitors in biological experiments. There are 4 figures.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics of the Academy of Sciences USSR)

SUBMITTED: August 10, 1962

Card 2/2

AUTHOR: Strigunkov, F.I. 130-11-11/14

TITLE: Along the Path of Technical Progress (Po puti tekhnicheskogo progressa)

PERIODICAL: Metallurg, 1957, no.11, pp. 31 - 34 (USSR).

ABSTRACT: The author describes the history of the Verkh-Isetskiy [Sverdlovsk] Metallurgical Works since the foundation of the first works on the site in 1723. He devotes considerable attention to political factors. The works suffered severely in the Civil War (but not in the Second World War) and was hired out in 1921 to a group of workers. By 1922, a high rate of reconstruction was achieved and the production of light sheet iron, for long the main product of the works, increased rapidly (10 323 tons in 1922-23, 13 784 tons in 1923-24). Production of transformer steel was started, and this rapidly displaced sheet iron as the main product. In the war, the works was awarded the Red-Banner Labour Order (orden Trudovogo Krasnogo Znameni) for successfully producing a wide range of special steels. In the post-war, five-year plan, production of transformer steel was increased through better utilisation of equipment and quality was improved. Since 1952, chrome-magnesite and the magnesite-chromite roofs have been used in the open-hearth furnaces. Losses have been reduced to 1.36, 1.2 and 1.44 W/kg for 0.5 and

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0.35 mm thick electric steel and 0.5 mm thick open-hearth steel, respectively. Wide use is made of vacuum treatment and a vacuum annealing furnace (1 090 - 1 120 °) has been introduced. The author mentions future development, including the adoption of continuous casting, the construction of an oxygen plant, a continuous hot-rolling mill for coils of 1.6 - 2.0 mm sheet for reduction, eventually, in a cold-rolling mill. The author gives data on the education of workers and mentions S.A. Tserikh and A.M. Shchipanov as senior executives who have risen from the ranks of the workers. There are five figures.

AVAILABLE: Library of Congress.

Card 2/2

AUTHOR: Strigunkov, F.I., Engineer SOV-28-58-4-38/55

TITLE: Advantages of the New Standard for Electrotechnical Steel (Preimushchestva novogo standarta na elektrotekhnicheskuyu stal')

PERIODICAL: Standartizatsiya, 1958, Nr 4, p 83 (USSR)

ABSTRACT: Information is presented on a new GOST Standard "802-58" applicable in the production of electrotechnical thin-sheet steel with raised requirements to the steel quality. The use of this steel, which is produced at the Verkh-Isetsk Metallurgical Plant permits a reduction in the parasitic electrical loss and size of electric machines and devices. One of the most important advantages is the reduced watt-loss which is taken as an indicator for the economical efficiency of the new standard. After reconstruction of the plant, planned for the near future, fully mechanized production of cold-rolled electrotechnical steel will be started

ASSOCIATION: Verkh-Isetskiy metallurgicheskiy zavod (Verkh-Isetsk Metallurgical Plant)

Card 1/1 1. Steel--Standards 2. Steel--Applications 3. Sheets--Electrical properties

STRIGUNOV, F. I.

Cand Tech Sci - (diss) "Study of the roasting process for Rozdol'skaya sulfur ore in pseudo-liquid condition." Novocherkassk, 1961. 18 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Novocherkassk Order of Labor Red Banner Polytechnic Inst imeni Sergo Ordzhonikidze); 225 copies; price: free; (KL, 10-61 sup, 219)

TABUNSHCHIKOV, N.P.; STRIGUNOV, F.I.

Ways of lowering the cost of lime. Khim.prom. no.9:670-674 S '63. (MIRA 16:12)

STRIGUNOV, F.I., kand. tekhn. nauk

Gasification of mazut in cyclone chambers. Stroi. mat. 10 no.9:21 S '64 (MIRA 18:2)

[illegible], F.I. [Stepanov, F.I.], kand. tekhn. nauk

Temperature regulation in laboratory furnaces. Khim. prom. [Ukr.] no.3:73 Jl-S '63. (MIRA 17:8)

1. Nauchno-issledovatel'skiy institut organicheskikh [illegible].

STRIGUNOV, F.I. [Stryhunov, F.I.], kand. tekhn. nauk

Some characteristics of the burning of sulfur. Khim. prom. [Ukr.] no.3:10-13 Jl-S '64. (MIRA 17:12)

SAMEDOV, S.I.; STRIGUNOV, I., red.; EFENDIYEV, M.E., red.; AKHMEDOV, S., tekhn. red.

[Public health in Iranian Azerbaijan on the eve of and during the period of the national liberation and democratic movement, 1945-1946] Zdravookhranenie v Iranskom Azerbaidzhane nakanune i v period natsional'no-osvoboditel'nogo i demokraticheskogo dvizheniia, 1945-1946 g. Baku, Azerbaidzhanskoe gos. izd-vo, 1960. 146 p. (MIRA 14:7)
(IRAN--PUBLIC HEALTH)

GULIYEV, A.N.; STRIGUNOV, I.V., red.; MIRKISHIYEVA, S., tekhn. red.

[The Baku proletariat during the new stage of revolutionary activity]Bakinskii proletariat v gody novogo revoliutsionnogo pod"ema. Baku, Azerneshr, 1963. 297 p. (MIRA 16:2)
(Baku—Labor and laboring classes)
(Baku--Strikes and lockouts)

STRIGUNOV, V. M.

Teoreticheskoe i eksperimental'noe issledovanie raboty tonkostennykh balok. Moskva, 1938, 57 p., illus., diagrs. (TSAGI. Trudy, no. 349)

Bibliography: p.57

Title tr.: Theoretical and experimental study of the behavior of thin-walled beams.

QA911.M65 no.349

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress 1955.

STRIGUNOV, V...

K raschetu kapotov na prochnost'. (Tekhnika vozdushnogo flota, 1940, no. 6, p. 11-25, illus., diagrs.)

Title tr.: Strength calculation of cowlings.

TL504.T4 1940

SO: Aeronautical Sciences and Aviation in the Soviet Union , Library of Congress, 1955

STRIGUNOV, V.M.; ARISTOV, I.A., redaktor; PISKAREVA, N.N., tekhnicheskiy redaktor

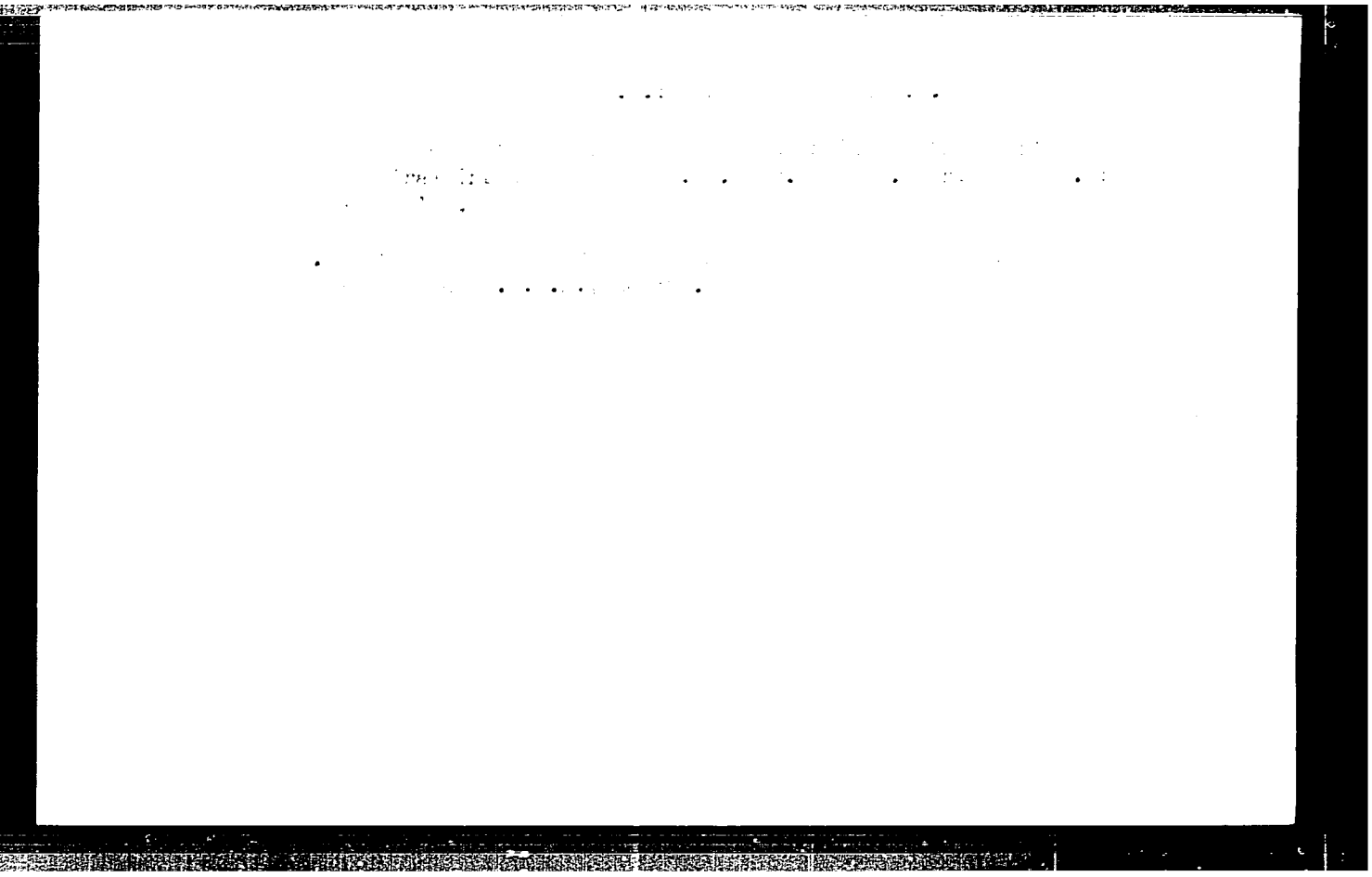
[Construction of airplane cowlings and calculation of their durability] Konstruktsiia i raschet na prochnost' aviatsionnykh kapotov. Moskva, Oborongiz glavnaia redaktsiia aviatsionnoi lit-ry, 1946. 107 p. (MLRA 8:2)
(Airplanes--Design and construction)

22. Structural Stability of Swept Wings and Tail Assemblies

"Calculation of the Structural Stability of Swept Wings and Tail Assemblies of Aircraft," by V. M. Strigunov, Tr. Mosk. aviats. in-ta, 1955, 46, 48 pp, ill. (from Referativnyy Zhurnal -- Mekhanika, No 4, Apr 57, Abstract No 4889, by L. I. Balabukh)

"This is an aid for a diploma project design for the course, 'Calculation of Aircraft Structural Stability.' It describes approximation methods used in calculations of swept wings of varied construction. A more detailed discussion is given for wings of single spar construction in which the ribs are arranged both parallel to the air flow and perpendicular to the main spar.

"The methods of calculation of double spar and caisson wings, which are based on engineering approximations, can be used for calculating aircraft structural stability while in the general design stage." (U)



APPROVED FOR RELEASE: 08/26/2000 CIA-RDP86-00513R001653520018-0"

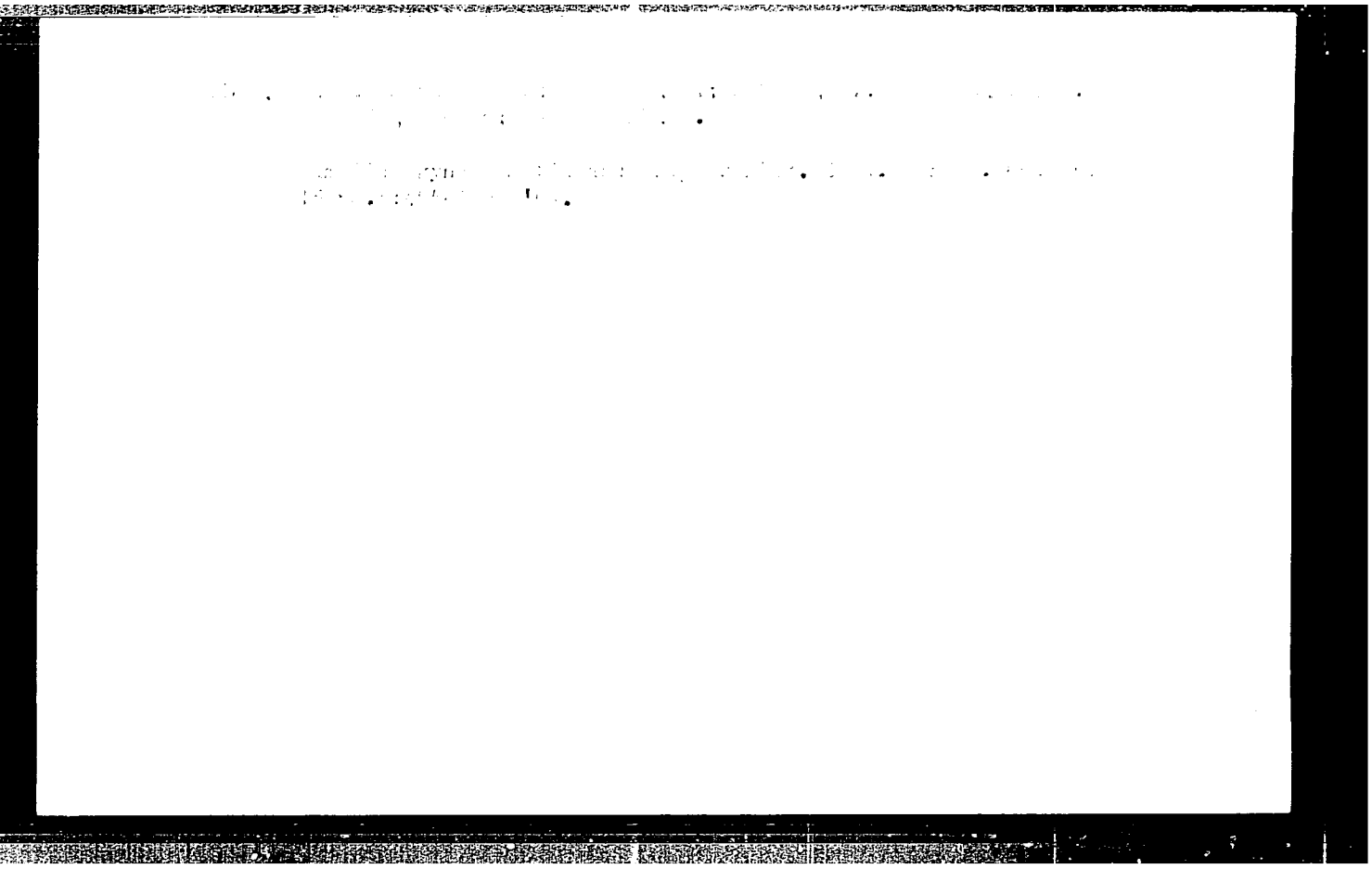
LAVROVA, P.Ya., STRIC[illegible]NKO, Yu.P., [illegible]EV, I.M.

Leading factors of the epidemiological process in the leptospirosis foci of the lower Kuban River. Zhur. mikrobiol., epid. i immun. 41 no.9:112-117 S '64. (MIRA 18:4)

1. TSentral'nyy institut epidemiologii i II Moskovskiy meditsinskiy institut.

MILCU, St.-M., acad.; [illegible], [illegible].; STRIHAN, [illegible]; [illegible], [illegible];
AUGUSTIN, M.; MAXIMILIAN, C.

Turner's syndrome with pituitary adenoma and XC karyotype.
Stud. cercet. endocr. 15 no.3:257-262 '64.



MILCU, St.-M.; IONESCU, B.; IOANITIU, D.; STRIHAN, Pulca; MAXIMILIAN, C.

Hypophysial changes in gonadal dysgenesis. Stud. cercet. endocr. 15 no.6:563-568 '64.

SERBAN, A.M.D.; WOLFSHAUT, C.; STRIHAN, Fulica; KIEFSCH, Ilia; OPRESCU, Marcela; MAXIMILIAN, C.

Secondary amenorrhea in two monozygote twins. Stud. cercet. endocr. 15 no.2:155-160 '64.

MILCOU, St.M. [Milcu, St M.], IN[illegible]CU, [illegible]; STRIHAN, [illegible], ILIESCU, Ileana; AUGUSTIN, M.; MAXIMILIAN, C.

Congenital anorchia. Rev Roum embryol 1 no.2:[illegible] '64.

1. Institute of Endocrinology, Rumanian Academy, Bucharest.

STRIHAVKA, V.

Most efficient diameter for pipes of the heating system with forced water circulation. p. 62.

ZDRAVOTNI TECHNIKA A VZDUCHOTECHNIKA. (Ceskoslovenska akademie ved. Ceskoslovenska vedecka technika spolecnost pro zdravotni techniku a vzduchotechniku) Praha, Czechoslovakia. Vol 2, no. 2, 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, no. 7, July 1959. Uncl.

STRIHAVKA, Vladislav, inz.

Peak boiler plant for a heating and power system. Zdravot tech 6 no.3:128-129 '63.

1. KPU, Praha.

STRIKHA, V.I.; KIL'CHITSKAYA, S.S.

Measuring thin oxide films on germanium and silicon surfaces.
Prib. i tekh. eksp. 9 no.3:177-180 My-Je '64 (MIRA 18:1)

1. Kiyevskiy gosudarstvennyy universitet.

HUNGARY / Chemical Technology. Chemical Products and Their Application. Instruments and Automation. H

Abs Jour: Ref Zhur-Khimiya, No 12, 1959, 42648.

Author : Striker G.
Inst : Not given.
Title : Control and Measurement Technology - A Separate Science.

Orig Pub: Meres es automat., 1956, 4, No 10, 289-293.

Abstract: Text of the presentation made at the Conference that reviews the control and measurement technology. -- D. Pyushpeki.

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STRIKER , GY.

The influence of technical progress on the evolution of measuring and instrument technique. p. 330.

MAGYAR TUDOMANYOS AKADEMIA. (Meresztechnikai es Automatikai Tudomanyos Egyesulet) Budapest, Hungary, Vol. 6, no. 11/12, 1958.

Monthly list of East European Accessions (EEAI) LC, vol. 8, no. 2, July 1959.

Uncl.

CHIN./Optics - Photometry. Colorimetry K-12

Abs Jour : Ref Zhur - Fizika, No 4, 1959, No 7071

Author : Striker G.O.
Inst : -
Title : Ultraphotometer with Magnetic Modulation of the Photomultiplier Current

Orig Pub : Uli syuebao, Acta phys. sinica, 1958, 14, No 1, 23-36

Abstract : An investigation was made of the possibility of employing the method of magnetic modulation of the photocurrent to a photomultiplier. The dependence of the depth of modulation of the current, the linearity of the amplitude characteristic, and the ratio of the signal to noise on the supply voltage to the photomultiplier and on the magnitude of the modulating field were all determined. The investigation was carried out for two types of photomultipliers: a circular one -- RCA 931/A, and a linear one -- FEU-25-M. It is shown that the lower limit of the measured light flux reaches 10^{-12} lumens without cooling the photomultiplier or other means of reducing

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Abs Jour : Ref Zhur - Fizika, No 4, 1959, No 7071

the dark current. When the dark current is reduced by superposition of a negative potential to the external wall of the photomultiplier bulb, the lower limit of measured light flux is reduced by one order of magnitude. A simple photometer construction has been developed, and has been called, owing to its high sensitivity, the "ultraphotometer." The above method is used in this ultraphotometer. The possibility of using the photometer for the measurement of x-ray and nuclear radiations together with the use of scintillation crystals and phosphors is investigated. -- Yu.M. Kutev

HUNGARY/Electronics - The Application of Electronics andVacuum Technique H-10

Abs Jour : Ref Zhur - Fizika, No 4, 1959, No 6269

Author : Striker G.O.
Inst : Institute of Measurements and Instruments, Hungarian Academy of Sciences
Title : Ultraphotometer Using Magnetically Modulated Photomultiplier

Orig Pub : Acta techn. Acad. scient. hung., 1958, 20, No 1-2, 83-102

Abstract : Detailed description is given of a device of a photoelectric multiplier, in which a photoelectronic multiplier is used, modulated by a magnetic field. The principal data on this equipment are also given. The threshold of sensitivity of the instrument is 10^{-12} lumens. Bibliography, 16 titles.

Card : 1/1

63

Striker, Gy.; Schanda, J.; Kiss, B.

Application of the ultraphotometer for the potimal use of the resolution of spectrophotometers. p.40

MERES ES AUTOMATIKA. (Merstechnikal es Automatizalasi Tudomanyo Egyesulet) Budapest, Hungary. Vol.7, no.2/3, 1959

Monthly List of East European Accessions (EEAI) LC, Vol.8, no.11
November 1959
Uncl.

STRIKER, Gyorgy, muegyet. docens

Report of the general secretary to the 3d general assembly of MATE. Meres automat 8 no.12:368-376 '60.

1. A Merestechnikai Kozponti Kutato Laboratorium igazgatoja, a MATE foititkara.

STRIKER, Gyorgy, dr., muegyet docens

Possibilities in a long-range planning of instrumentation in the planned economy. Meres automat 9 no.11:321-328 '61.

1. Merestechnikai Kozponti Kutato Laboratorium es Szerkeszto bizottsagi tag, "Meres es Automatika".

STRIKER, Gyorgy, dr.; MAJLAT, Laszlone

Organizational and economic aspects of instrumentation and automation. Meres automat 10 no.4:102-103 '62.

1. "Meres es Automatika" szerkeszto bizottsaganak tagja (for Striker).

STRIKER, Gyorgy, dr., a muszaki tudomanyok kandidatusa

Conference on Microwave Mensuration. Meres automat 10 no.9:265-267 '62.

1. Merestechnikai es Automatizalasi Tudomanyos Egyesulet alelnoke, es "Meres es Automatika" szerkeszto bizottsagi tagja.

STRIKER, Gyorgy, dr.

On the threshold of the second decade. Meres automat 11 no.1:1 '63.

1. "Meres es Automatika" szerkeszto bizottsagi tagja.

STRIKER, R.

Yugoslavia (430)

Technology-Periodicals

Unutilized domestic plans for the production of tannin. p.299. TEHNICKI PREGLED. (Croatia: Uprava za unapredenje proizvodnje pri privednom savjetu) Zagreb. (Bimonthly technical journal issued by the Production Improvement Administration of the Economic Council) No. 6, 1951.

East European Accessions List. Library of Congress Vol. 2, No. 6, June 1953. Unclassified.

STRIKER, R.

Yugoslavia (430)

Technology

Tanning Colloids, p. 45. KEMIJA U INDUSTRIJI.

Vol. 1, no. 2, 1952.

East European Accessions List, Library of Congress
Vol. 1, no. 14, Dec. 1952. UNCLASSIFIED.

STRIKER, R.

Yugoslavia (430)

Agriculture-Plant and Animal Industry

Lignin as a raw material p. 51.
SUMARSKI LIST. Vol. 76, no. 1-3,
Jan.-Mar. 1952

East European Accessions List. Library of Congress. Vol. 2, no. 3, March 1953. UNCLASSIFIED

STRIKER, R.

"Problems and prospects of the chemical treatment of wood." p. 7. (Drvna Industrija. Vol. 4, no. 7/8, July/Aug. 1953. Zagreb.)

SO: Monthly List of East European Accessions. Vol. 3, no. 3. Library of Congress. March 1954. Uncl.

[illegible]

[illegible] cellulose. no. 6. ([illegible], Vol. 5, no. 3/4, Mar./Apr. 1956, [illegible], Yugoslavia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, no. 1 Jan. 1955, Uncl.

STRIKHA, I.A.

Causes of deformation in wooden parts and how it can be decreased. Der. i lesokhim.prom. 3 no.7:7-11 Jl '54. (MLRA 7:7)

1. Ukrainskiy nauchno-issledovatel'skiy institut mekhanicheskoy obrabotki dereva.
(Wood--Defects) (Lumber)

STRIKHA, I.A., kandidat tekhnicheskikh nauk.

Internal stress and the formation of cracks in beechwood. Der.prom. 4 no.4:10-13 Ap '55. (MLRA 8:6)

1. Ukrainskiy nauchno-issledovatel'skiy institut mekhanicheskoy obrabotki drevesiny.
(Wood--Testing) (Beech)

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A052/A001

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1959, No. 12, p. 12,
24005

AUTHORS: Lashkarev, V.Ye., Litovchenko, V.G., Omel'yanovskaya, N.M., Pondarenko, R.M., Strikha, V.I.

TITLE: Dependence of the Life Time of Minority Charge Carriers on Concentration of Antimony Admixture in Germanium

PERIODICAL: Nauk. shchorichnyk. Radiofiz. fak. Kyivs'k. un-tu, 1956, Kyiv, 1957, pp. 495-496 (Ukrainian)

TEXT: The dependence of the life time τ of minority charge carriers on the concentration of Sb up to the values approaching the solubility limit of Sb in Ge ($n = 4 \cdot 10^{18}$ cm^{-3}) has been studied. The concentration has been determined from the Hall effect, τ has been measured by optical methods. It has been established that with n increasing from $5 \cdot 10^{13}$ to 10^{15} cm^{-3}, the life time was inversely proportional to n (τ decreased from 300 to 15 microseconds). At a further increase

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of n the inverse proportionality did not hold and τ changed more slowly, attaining ~ 2.5 microseconds at $n = 5 \cdot 10^{17}$ cm^{-3}. At n increasing up to $4 \cdot 10^{18}$ cm^{-3} the life time showed no noticeable decrease. When computing τ from the formula $D\tau = l_5^2$ the dependence of D on n was taken into account, at high values of n this dependence becomes strong. The found dependence of τ on n agrees with the Shockley-Reed recombination theory. There are 5 references.

A.P.A.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

STRIKHA, V.I.

AUTHORS: Lashkarev, V. Ye., Litovchenko, V. G., Omel'yanovskaya, N. M., Bondarenko, R. N., Strikha, V. I. 57-11-2/33

TITLE: Lifetime Dependence of Foreign Current Carriers upon Concentration of Antimony Admixture in Germanium (Zavisimost' vremeni zhizni storonnikh nositeley toka ot kontsentratsii primesi sur'my v germanii).

PERIODICAL: Zhurnal Tekhn. Fiz., 1957, Vol. 27, Nr 11, pp. 2437-2439 (USSR).

ABSTRACT: The dependence of lifetime τ of the antimony concentration admixture is investigated up to the boundary which lies near the solubility boundary of antimony in germanium $n \approx 4.10^{18}$ cm^{-3} at a great number of germanium patterns. τ was measured by means of optical methods. It is shown that in the case of an increase of the antimony admixture concentration of from $n = 5.10^{13}$ cm^{-3} to $n = 10^{15}$ cm^{-3} it was again confirmed that τ is inversely proportional to n. In the case of a further increase of the concentration this is disturbed, is slowly reduced and reaches the value $\tau \approx 2{,}8\,\mu$sec at $n = 5.10^{17}$ cm^{-3}. This value scarcely changes in the case of a further increase of n up to the maximum concentrations ($n = 4.10^{18}$ cm^{-3}). It is shown that

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Lifetime Dependence of Foreign Current Carriers upon Concentration of Antimony Admixture in Germanium. 57-11-2/33

the independence of the lifetime τ of n at great n follows immediately from the recombination theory of W. Shockley and W. Read a fact which was also observed here in the investigations. It is furthermore shown that in this case the deep-lying levels are responsible for the recombination. The conclusion can be drawn that the admixture atoms of the antimony are not immediately the effective recombination centres. Apparently the not controllable, deeper lying admixtures are responsible for the recombination. These admixtures are introduced either together with the antimony or they are already present in the germanium initial material. The introduction of antimony leads to an alteration of the position of the Fermi-level i. e. of the ionization degree of this recombination level which leads, however, to the increase of the recombination probability.
There are 2 figures and 3 Slavic references.

ASSOCIATION: Kiyev State University (Kiyevskiy gosudarstvennyy universitet).

SUBMITTED: April 15, 1957.

AVAILABLE: Library of Congress.

Card 2/2

S/058/62/000/006/087/136
A057/A101

AUTHORS: Litovchenko, V. G., Strikha, V. I., Bondarenko, R. M.

TITLE: The effect of slow relaxation photo-emf of a point contact on germanium

PERIODICAL: Referativnyy zhurnal, Fizika, no. 6, 1962, 37, abstract 6E298 ("Visnik Kyivs'k. un-tu", 1958, no. 1, ser. fiz. ta khimii, v. 1, 123 - 128, Ukrainian; Russian summary)

TEXT: A slow exponential change in the photo-emf of a point collector on n- and p-Ge was observed after the start (or stop) of illumination ($\tau \geq 5$ - 1,000 sec.). The slow change of the photo-emf on non-molded contactsattained 40% and more of the steady value. Thus the readings have to be made after a time $\gg \tau$ in the common methods of measuring the length of diffusion, in order to avoid errors. The time of relaxations depends considerably upon the specific resistance ($\tau \cong 60\rho^{1/2}$) sec. and the condition of the surface (it decreases with aging of the surface, adsorption of ethanol vapors, and molding). The surface nature of the observed effect is demonstrated, therefore the surface

Card 1/2

The effect of...

electron system participates directly in the formation of a point Ge-detector.

V. Litovchenko

[Abstracter's note: Complete translation]

41027

S/058/62/000/009/067/069
A057/A101

AUTHORS: Strikha, V. I., Bondarenko, R. M., Omel'yanovs'ka, N. M., Litovchenko, V. G.

TITLE: The effect of the specific resistance and life time of carriers on the current sensitivity of detectors of the centimeter range

PERIODICAL: Referativnyy zhurnal, Fizika, no. 9, 1962, 12, abstract 9-4-23g ("Visnik Kiyvs'k. un-tu", 1958, no. 1, ser. fiz. ta khimiy, v. 1, 143 - 144, Ukrainian; summary in Russian)

TEXT: One of the most important parameters of a superhigh-frequency reception detector is the current sensitivity β. This value depends in germanium upon the current, the displacement constant, the introduced admixtures, and the specific resistance of the materials. Alloying germanium with antimony best results were obtained for samples with a specific resistance of 0.003 - 0.01 ohm·cm. Dependences of the parameters of superhigh-frequency detectors upon the life time of minority carriers and the specific resistance of the material are clarified. Detectors of germanium, alloyed with Sb, Fe, and Ga were prepared.

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SOV/120-58-2-32/37

AUTHORS: Bondarenko, R.N., Strikha, V.I., Sokolov, B.L.

TITLE: Screening of the Slit of a Measuring Waveguide for the Decimeter Range (Ekranirovaniye shcheli izmeritel'noy linii detsimetrovogo diapazona)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1958, Nr 2, pp 109-110 (USSR)

ABSTRACT: It is shown that, in work with industrial coaxial measuring lines designed for the decimeter range, the distribution of the electromagnetic field may be distorted when electromagnetic interference is present. The line IL-D is considered. A method for screening the slit of the measuring line is described. The screening device consists of a metallic band attached to the body of the line and covering the slit, two pulling drums with springs, and special guides which fix the position of the ribbon relative to the probe of the measuring line. An aperture is drilled at the centre of the metallic band and the probe is inserted through this aperture. Fig.1 shows the distribution of the electromagnetic waves along the line without the screening attachment, and Fig.5 shows the improved pattern obtained with a screened slit. The accuracy of measurement is

Card 1/2

Screening of the Slit of a Measuring Waveguide for the Decimeter Range.

this clearly improved and the line can be used for small incident power. Thus for example the distribution shown in Fig.5 was obtained with $\lambda = 60$ cm and $W = 4 \times 10^{-6}$ watt. There are 5 figures, no tables or references.

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet (Kiyev State University)

SUBMITTED: June 24, 1957.

1. Waveguide slots--Equipment 2. Electromagnetic waves--Control 3. Electromagnetic waves--Measurement

LASHKAREV, V.Ye. [Lashkar'ov, V.IE]; BONDARENKO, R.N. [Bondarenko, R.M.]; DOBROVOL'SKIY, V.N. [Dobrovol's'kyi, V.M.]; ZUBRIN, G.P. [Zubrin, H.P.]; LITOVCHENKO, V.G. [Lytovchenko, V.H.]; STRIKHA, V.I.

Properties of germanium containing beryllium admixtures. Ukr. fiz. zhur. 4 no.3:372-375 My-Je '59. (MIRA 13:2)

1.Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko.
(Germanium) (Beryllium)

L 18991-63 EWT(l)/EWP(q)/EWT(m)/BDS AFFTC/ASD/ESD-3/IJP(C) GG/JD/JG

ACCESSION NR: AT3002451 S/2935/62/000/000/0174/0179

65
64

AUTHOR: Strikha, V. I.

TITLE: Effect of majority-carrier concentration on the surface recombination rate in germanium [Conference on Surface Properties of Semiconductors, Institute of Electrochemistry, AN SSSR, Moscow, 5-6 June, 1961]

SOURCE: Poverkhnostnyye svoystva poluprovodnikov. Moscow, Izd-vo AN SSSR, 1962, 174-179

ABSTRACT: Experimental studies with Sb-alloyed n-Ge and Ga-alloyed p-Ge are described. The conductivity-modulation method was used in the measurements carried out with two thicknesses of the specimen which permitted determining the surface-recombination rate s and volume lifetime separately. To reduce error, the surface treatment of specimens of the same thickness was carried out several times and the results were averaged. The surface was dried by a hot-air jet, and measurements were made in the air. Perhydrol and "SR-8" were used as etching agents. Curves representing s vs. majority-carrier

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L 18991-63

ACCESSION NR: AT3002451

concentration and s vs. temperature are presented. The assumption that the recombination takes place via the levels with an energy position of +4kT and a concentration of about 5×10^{11} /cm^{1} was corroborated. Orig. art. has: 4 figures and 2 formulas.

ASSOCIATION: Kiyevskiy gosudarstvenny*y universitet im. T. G. Shevchenko (Kiev State University)

SUBMITTED: 00 DATE ACQ: 15May63 ENCL: 00

SUB CODE: PH NO REF SOV: 006 OTHER: 007

Card 2/2

S/139/63/000/001/016/027
E202/E420

AUTHOR: Strikha, V.I.

TITLE: The problem of the application of dielectric inserts during study of the surface phenomena of semiconductors

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Fizika, no.1, 1963, 96-98

TEXT: Recently it was found that when an electric field is applied to a condenser with an insulating mica insert, the latter takes part of the condenser charge and in this way is an active element in a mica-semiconductor system. It was determined that up to 95% of the general charge of the condenser may concentrate on the mica. This phenomenon and the conditions of charge formation were studied further to find out whether they are common only to mica. For this purpose a circuit as shown in Fig.1 was used. The charge on the dielectric was defined as the difference between the total charge and the charge which was retained on the raised upper electrode. The time of discharge was in excess of 10 minutes. Mica plates, polystyrol films and condenser paper impregnated with cerosine were investigated.
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The problem of the application ...

After the application of a constant voltage all these showed that a considerable part of the charge was retained on the dielectric. This phenomenon was independent of the electrode material. The distribution of the charge with respect to time, between the dielectric and the electrodes was studied. This process attained equilibrium within a few tens of seconds and was present only in the case of mica. With a sufficiently high field voltage in excess of 1.5 to 3 x 10^5 V/cm the charge on the dielectric consisted of two parts: the free, which could be easily removed from the dielectric, and the stable, which was retained for a long time. The sign of both these charges coincided with the signs on the electrodes. The effect of the ambient atmosphere on the dielectric inserts was also studied. The experiments showed that when studying the surface properties of semiconductors the dielectric inserts should be used with great care since an accumulation of charge on their surfaces may lead to a wrong determination of the concentration and energy state of the surface and thus lead to a wrong conclusion. In vacuum, however, the effects connected with the formation of charge on the surface of a

The problem of the application ...

dielectric are substantially absent and the surface studies of semiconductors using dielectric inserts may be carried out without subsequent errors. There are 2 figures.

ASSOCIATION: Kiyevskiy gosuniversitet imeni T.G.Shevchenko
(Kiyev State University imeni T.G.Shevchenko)

SUBMITTED: October 16, 1961

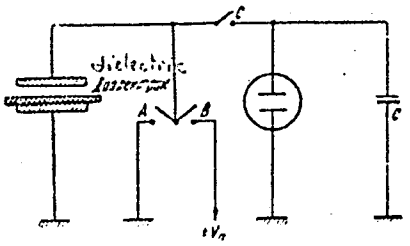

Fig.1.

L 01284-66 EWT(l)/T/EWA(h) IJP(c) AT/GS

ACCESSION NR: AT5020447 UR/0000/64/000/000/0034/0038

AUTHOR: Strikha, V. I.; Kil'chitskaya, S. S.

TITLE: Surface recombination velocity in silicon as a function of the concentration of majority charge carriers

SOURCE: Mezhvuzovskaya nauchno-tekhnicheskaya konferentsiya po fizike poluprovodnikov (poverkhnostnyye i kontaktnyye yavleniya). Tomsk, 1962. Poverkhnostnyye i kontaktnyye yavleniya v poluprovodnikakh (Surface and contact phenomena in semiconductors). Tomsk, Izd-vo Tomskogo univ., 1964, 34-38

TOPIC TAGS: silicon semiconductor, carrier lifetime, electron recombination, surface property, crystal surface, semiconductor research, etched crystal

ABSTRACT: Since the silicon used for semiconductor devices often varies in resistivity, the authors studied the effect of majority carrier concentration on surface recombination velocity for various methods of treating the surface of silicon. The conductivity modulation method (K. D. Glinchuk, Ye. G. Miselyuk, E. I. Rashba, *ZhTF*, 26, 12, 1956) was used for measuring the surface recombination velocity. The effective lifetime of the carriers during illumination of the sample is determined by

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ACCESSION NR: AT5020447 0

volumetric and surface recombination. The diffusion length L_g and the surface recombination velocity may be determined by measuring τ_{eff} in two specimens of different thicknesses d from the formula $\tau_{eff} = \frac{L_g}{S}$ at $d \geq 3L_g$ or $\tau_{eff} = \frac{d}{2S}$ at $d < L_g$, where S is the surface recombination velocity. The experimental apparatus is described. Samples of B-doped p-silicon were studied with resistivities in the 270-0.1 Ω·cm range. Two surface treatments were used: polishing with M-7 powder and etching in SR-8. Satisfactory ohmic contacts were made by electrolytic deposition of nickel on the ends of the specimens. Since the velocity of surface recombination depends on the intensity of illumination, the authors made a preliminary study of surface recombination velocity as a function of injection level $\{\frac{\Delta p}{p_0}\}$. It was found that the surface recombination velocity decreases with a reduction in the injection level, and is independent of the intensity of illumination at low levels of injection. All measurements of surface recombination velocity were made at illumination levels low enough for the recombination velocity to be constant. Surface recombination velocity is shown as a function of majority carrier concentration in fig. 1 of the Enclosure for the two surface treatments. This relationship between recombination velocity and carrier concentration should be taken into account in the

L 01284-66
ACCESSION NR: AT5020447

manufacture of semiconductor devices. Orig. art. has: 3 figures, 3 tables.

ASSOCIATION: none

SUBMITTED: 06Oct64 ENCL: 01 SUB CODE: SS, NP

NO REF SOV: 006 OTHER: 005

Card 3/4

L 01284-66

ACCESSION NR: AT5020447

ENCLOSURE: 01

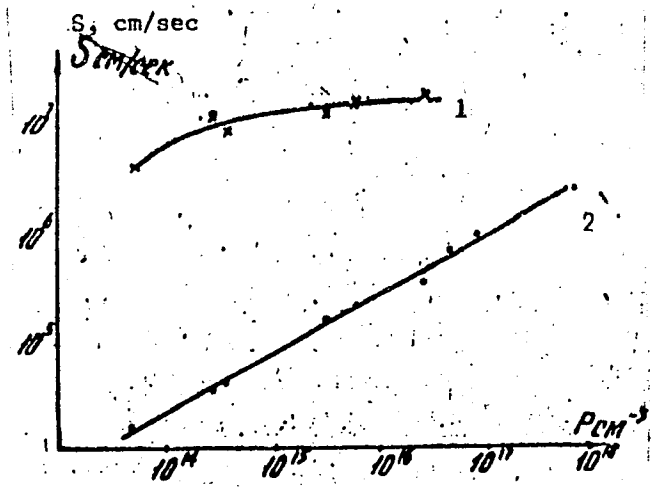

Fig. 1. Surface recombination velocity as a function of concentration: 1--polished specimens; 2--etched in SR-8.

Card 4/4

L 1112-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/GS

ACCESSION NR: AT5020475 UR/0000/64/000/000/0290/0295

AUTHOR: Strikha, V. I.

TITLE: On the theoretical calculation of the linear region of the volt-ampere characteristic of a point contact

SOURCE: Mezhvuzovskaya nauchno-tekhnicheskaya konferentsiya po fizike poluprovodnikov (poverkhnostnyye i kontaktnyye yavleniya). Tomsk, 1962. Poverkhnostnyye i kontaktnyye yavleniya v poluprovodnikakh (Surface and contact phenomena in semiconductors). Tomsk, Izd-vo Tomskogo univ., 1964, 290-295

TOPIC TAGS: semiconductor, diode, germanium, group IV element, p n junction, point contact potential

ABSTRACT: An explanation for the deviation of the constant α from the theoretical value of 40 v^{-1} predicted by H. K. Henish (Rectifying Semiconductor Contacts. Oxford, 1957) in the volt-ampere characteristic in point contact diodes

$$I = I_s(e^{\alpha V} - 1),$$

is propounded. The explanation is based on the assumption that an oxide film 10 - 30Å thick is formed on the surface of the diode. Assuming further that: 1) the height of the space charge barrier is insufficient for the formation of an n-p

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junction, 2) charge carriers are reflected at the space charge layer rather than being scattered, 3) the fraction of charge carriers passing over the barrier is given by Maxwell's distribution law, 4) contact current does not disturb the thermal equilibrium, and 5) the thermo-electronic current is negligible compared to the tunnel effect current, the following expression for the current flowing over the barrier is derived

$$I_{1,2} = e\int_{-\infty}^{\infty} dv_y \int_{-\infty}^{\infty} dv_z \int_{v_x^{1,2}}^{\infty} 2\left(\frac{m}{h}\right)^3 e^{\frac{-\frac{m}{2}(v_x^2+v_y^2+v_z^2)+\beta}{\kappa T}} v_x D dv_x,$$

where 1 and 2 refer to the current from the metal into the semiconductor and the reverse current respectively. After integration and assuming that the average thermal velocity is given by

$$\bar{v} = \left(\frac{8kT}{\pi m}\right)^{\frac{1}{2}},$$

the volt-ampere expression becomes

$$I = \frac{en\bar{v}}{4} S\bar{D} e^{-\frac{\varphi}{kT}} \left(e^{\frac{eV_a}{kT}} - e^{-\frac{eV_a}{kT}}\right),$$

where S is the area of contact. The calculated dependence of the logarithm of current Ja on the voltage for various thickness of oxide film for germanium n-type diodes having an impurity concentration of 6×10^{17} cm^{-3} and a dielectric

L 1112-66
ACCESSION NR: AT5020475

transparency $\epsilon_1 = 1$ and $\epsilon_1 = 2$ is shown graphically in Fig. 1 on the Enclosure. It is concluded that: 1) the magnitude of α is less than 40 v^{-1} and depends on the properties and thickness of the oxide layer; 2) α is not constant but varies somewhat over the volt-ampere region investigated; 3) the magnitude of α depends on the specific resistance. Orig. art. has: 2 tables and 2 graphs.

ASSOCIATION: none

SUBMITTED: 060ct64 ENCL: 01 SUB CODE: EC

NO REF SOV: 002 OTHER: 003

Card 3/4

L 1112-66

ACCESSION NR: AT5020475

ENCLOSURE: 01

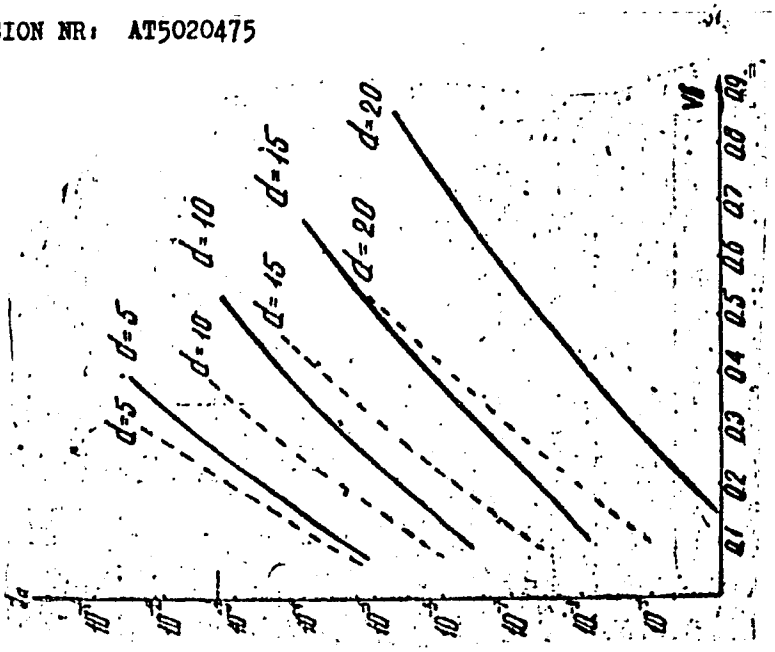

Fig. 1. Logarithm of the current Ja vs voltage for different oxide film thickness dA

Card 4/4 KC

L 1120-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/GS

ACCESSION NR: AT5020480 UR/0000/64/000/000/0335/0343

AUTHORS: Strikha, V. I.; Buzaneva, Ye. V. 44,55 44,55 58

TITLE: Investigation of the magnitude of the potential barrier as a function of the contact potential differential in a point contact

SOURCE: Mezhvuzovskaya nauchno-tekhnicheskaya konferentsiya po fizike poluprovodnikov (poverkhnostnyye i kontaktnyye yavleniya). Tomsk, 1962. Poverkhnostnyye i kontaktnyye yavleniya v poluprovodnikakh (Surface and contact phenomena in semiconductors). Tomsk, Izd-vo Tomskogo univ., 1964, 335-343 44,55

TOPIC TAGS: potential barrier, contact potential, cadmium, lead, zinc, aluminum, bismuth, indium, silicon diode, metal surface 27 27 27 44, 27, 55 27 27 27

ABSTRACT: The effect of the contact potential differential upon the magnitude of the potential barrier in a point friction contact between metals (Cd, Pb, Zn, Al, Bi, In) and silicon specimens was studied. The literature data on the subject are controversial, and the authors assume that this is due to the differences in surface conditions of the silicon in various experiments. Silicon specimens with boron impurities and with uniformly treated surfaces served as diodes in the present work. The contact potential differential was measured using a condenser

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L 1120-66
ACCESSION NR: AT5020480

method with application of a vibrating electrode. The magnitude of the potential barrier was determined as a temperature function of the diode resistance at a voltage extrapolated to zero. Prior to the main experiments, the pressure dependence of the magnitude of potential barrier and temperature dependence of the contact differential were determined. The former was found to be variable with an increased pressure in the contact point. A special setup was installed to stabilize the pressure. The contact potential differential was independent of the temperature. The changes in the work functions (contact potential differential) were 0.3-0.4 ev. The experimental setup for measuring the temperature function of the diode resistance is shown schematically. Data obtained on the dependence of the magnitude of potential barrier upon the contact potential differential are summarized on a graph. The experiments showed no conclusive dependence of the potential barrier (between the semiconductor and metal) upon the contact potential difference. The possibility of such dependence should not be neglected, however, during preparation of silicon point diodes. The results may be interpreted by assuming the presence on the surface of a discrete donor level having an energy location $(-9\pm)kT$ and concentration of the order of 10^{13} cm^{-2}. Orig. art. has: 3 figures, 1 table, and 6 equations.

ASSOCIATION: none

Card 2/3

L 1120-66
ACCESSION NR: AT5020480

SUBMITTED: 06Oct64 ENCL: 00 SUB CODE: EC

NO REF SOV: 002 OTHER: 007

Card 3/3

ACCESSION NR: AP4041047 S/0120/64/000/003/0177/0180

AUTHOR: Strikha, V. I.; Kil'chitskaya, S. S.

TITLE: Measuring thin oxide films on germanium and silicon

SOURCE: Pribory* i tekhnika eksperimenta, no. 3, 1964, 177-180

TOPIC TAGS: semiconductor, germanium, silicon, oxide film on Ge, oxide film on Si

ABSTRACT: Two parameters Δ and α that enter into R. G. Archer's formulas (J. Electrochem. Soc., 1957, 104, 10, 619) were experimentally determined and are reported on in the present article. Determining these parameters opened the way for finding absolute values of the thickness of oxide films on semiconductors by a well-known optical method (ellipticity of polarization of the reflected ray). The method is found to be applicable for measuring films up to 200Å thick. The preliminary results of measuring oxide films on Ge and Si after their surfaces

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ACCESSION NR: AP4041047

were etched with CP-8, HF, or H_2O_2, or mechanically polished, or obtained by spallation of the crystal in air, are reported. Orig. art. has: 3 figures, 7 formulas, and 2 tables.

ASSOCIATION: Kiyevskiy gosudarstvenny*y universitet (Kiev State University)

SUBMITTED: 28Jun63 ENCL: 00

SUB CODE: EC NO REF SOV: 002 OTHER: 002

Card 2/2

ACCESSION NR: AP4038620 S/0109/64/009/004/0681/0687

AUTHOR: Strikha, V. I.

TITLE: Calculation of the current-voltage characteristic of a mechanical metal-semiconductor contact with an allowance for the oxide film

SOURCE: Radiotekhnika i elektronika, v. 9, no. 4, 1964, 681-687

TOPIC TAGS: semiconductor, semiconductor diode, point contact diode, current voltage characteristic, semiconductor diode theory

ABSTRACT: Based on both the diffusion and diode theories, this formula is developed for the current-voltage characteristic of a point-contact diode:

$$i = (en_0\bar{v}/4)De^{-\varphi_0/kT}(e^{eV_1/kT} - e^{-eV_1/kT}),$$

where n_0 is the majority carrier concentration and $\bar{v}$ is the carrier average thermal velocity; the formula is valid for a low transmission factor $D \ll 4E^2_2U_n/\bar{v}$.

Card 1/2

ACCESSION NR: AP4038620

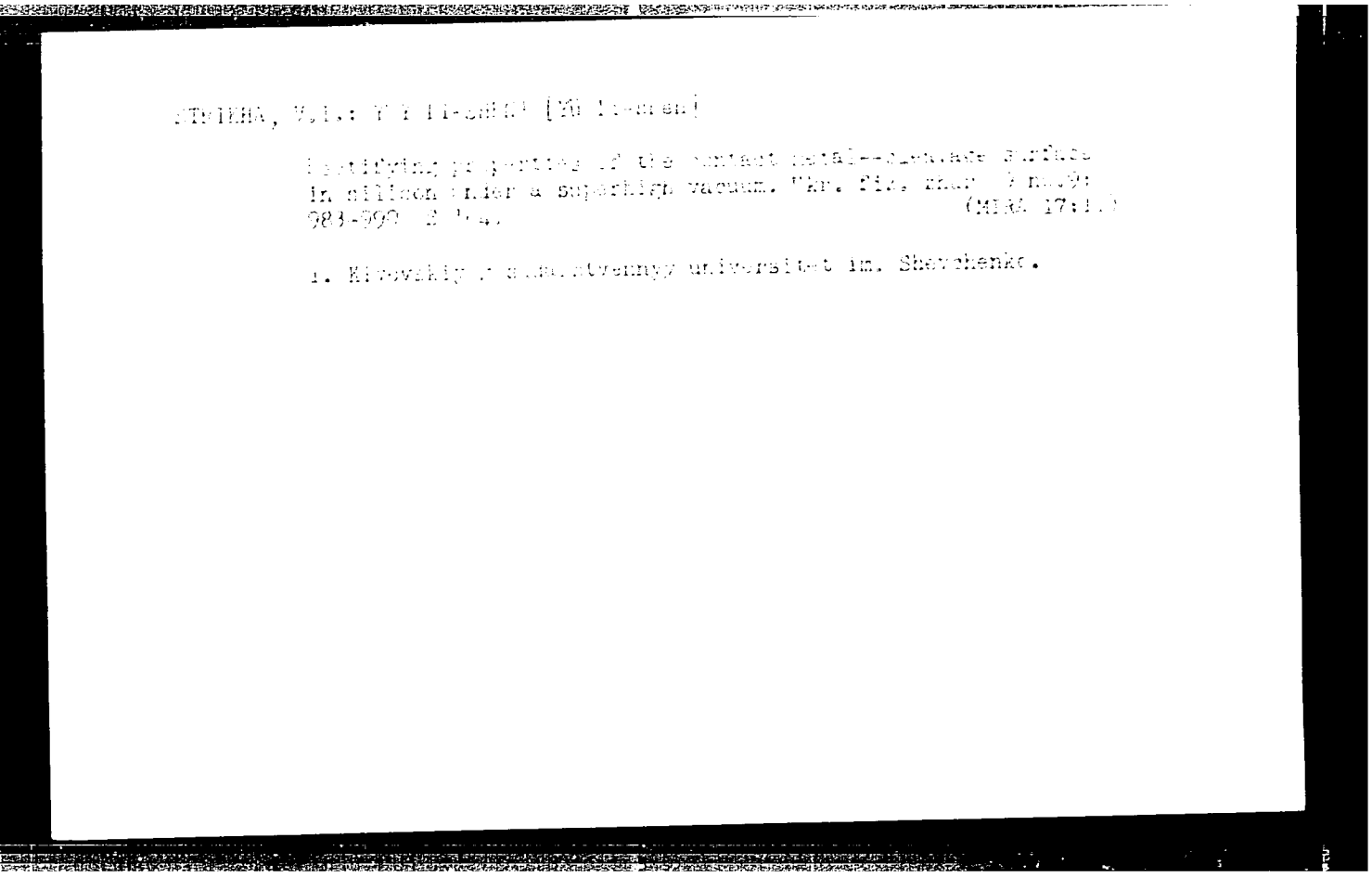
With heavy currents in the diode, the current-voltage characteristic may be represented by the conventional formula: $I = I_s(e^{\alpha V} - 1)$ with a parameter α under 40 per volt. A formula developed for the parameter α shows that this parameter: (a) decreases with thicker oxide films or with a higher majority-carrier concentration; (b) depends on the d-c flowing in the diode and also on the initial barrier φ_0 ; (c) depends on temperature in a way different from 1/T. Orig. art. has: 3 figures and 20 formulas.

ASSOCIATION: none

SUBMITTED: 08Feb63 DATE ACQ: 05Jun64 ENCL: 00

SUB CODE: EC NO REF SOV: 008 OTHER: 004

Card 2/2



L 19618-65 ASD(a)-5/AFWL/ESD(c)/RAEM(c)/ESD(dp)/ESD(t)
ACCESSION NR: AP5000463 S/0109/64/009/012/2192/2193

AUTHOR: Strikha, V. I.; Yu, Li-shen

TITLE: Effect of surface film on the rectifying properties of a mechanical metal-semiconductor contact

SOURCE: Radiotekhnika i elektronika, v. 9, no. 12, 1964, 2192-2193

TOPIC TAGS: semiconductor, semiconductor device, semiconductor contact

ABSTRACT: It has been known that experimental values of α in the current-voltage characteristic formula $I = I_s(e^{\alpha V} - 1)$ for a mechanical metal-semiconductor contact are always lower than e/kT as given by the diode and diffusion theories. A metal-semiconductor gap has been held responsible for this discrepancy. The present article reports results of experimentation with the above contact both in vacuum (10^{-9} mm Hg) and in air. Specimens of n-Si having a resistivity of 0.28—0.02 ohm-cm with chipped spot in contact with a metal

Card 1/2

L 19618-65
ACCESSION NR: AP5000463

needle were tested. Values of α measured immediately after chipping were close to e/kt and then fell off with time due to surface contamination by residual gases and oxidation. Orig. art. has: 1 formula and 1 table.

ASSOCIATION: none

SUBMITTED: 20Dec63 ENCL: 00 SUB CODE: EC

NO REF SOV: 001 OTHER: 001 ATD PRESS: 3158

Card 2/2

L 08337-67 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) JD/AT

ACC NR: AR6017146 SOURCE CODE: UR/0275/66/000/001/B005/B006

AUTHOR: Strikha, V. I.; Kil'chitskaya, S. S.

TITLE: The dependence of "surface recombination speed" of silicon on the concentration of the basic charge carriers

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 1B38

REF SOURCE: Sb. Poverkhnosti. i kontaktn. yavleniya v poluprovodnikakh. Tomsk. Tomskiy un-t, 1964, 34-38

TOPIC TAGS: silicon, silicon semiconductor, semiconductor carrier, carrier density, recombination

TRANSLATION: The speed (S) of surface recombinations in silicon in relation to concentration of basic charge carriers p_0 was investigated. The subject of the study was p-type silicon with boron impurity and specific resistivity in the range of 270 to 0.1 ohm/cm. The surface was finished either by polishing with M7 powder or etched with CP-8. Recombination speed was determined by the method of conductivity modulation; the measurements were carried out at low injection levels and without capture of the generated carriers by the electrodes. For the polished surface, the speed changed insignificantly up to a concentration of the basic carriers of $5 \cdot 10^{16}$ cm^{-3}, then remained constant and approximately equal to the thermal (recombination) speed of the carriers.

UDC: 539.293:546.28

Card 1/2

L 08337-67

ACC NR: AR6017146

For the CP-8 etched surface, the recombination speed is lower and for the change of p_0 from $4.6 \cdot 10^3$ cm^{-3} to $6.6 \cdot 10^{17}$ cm^{-3} the recombination speed increased from $2 \cdot 10^4$ cm/sec to $2.5 \cdot 10^6$ cm/sec. For the experimental line $Sv p^{0.5}$.

SUB CODE: 11,07,20

Card 2/2 nst

ACC NR: AR6017147 SOURCE CODE: UR/0275/66/000/001/B006/B006

AUTHOR: Strikha, V. I.; Buzaneva, Ye. V.

TITLE: Investigation of the dependence of the point contact potential barrier level, on contact variation of the potentials

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 1B39

REF SOURCE: Sb. Poverkhnosti. i kontaktn. yavleniya v poluprovodnikakh. Tomsk, Tomskiy un-t, 1964, 335-343

TOPIC TAGS: electric potential, electrode potential

TRANSLATION: The effect of contact potential difference on the barrier potential level in point rubbing in contact metal-*p*-type silicon in various Si surface treatment processes was examined. The barrier potential level was determined by establishing the temperature dependent resistance of a diode at a voltage extrapolated to zero. The test was performed on Si with a mixture of B. It was found that, depending on the initial contact potential difference magnitude (or output performance) of the Si sample, the barrier potential level did or did not depend on the contact potential difference. Thus, in the case of a gold electrode of <0.2 v, the barrier potential level depended on the contact potential difference; in the case of contact potential difference > 0.4 v, the barrier potential level did not depend on contact potential difference. The

UDC: 539.293:546.28

Card 1/2

ACC NR: AR6017147

data obtained are explained in terms of present day concepts of the electronic structure of the Si surface. It was concluded that in manufacturing point contact diodes, it is necessary to consider the dependence of the barrier potential level on the contact potential difference.

SUB CODE: 09

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ACC NR: AT6034356 SOURCE CODE: UR/0000/66/000/000/0132/0142

AUTHOR: Strikha, V. I.

ORG: Kiev State University (Kiyevskiy gosudarstvennyy universitet)

TITLE: Investigation of volt-ampere characteristics of a metal-p-silicon rubbing contact (α parameter)

SOURCE: AN UkrSSR. Poluprovodnikovaya tekhnika i mikroelektronika (Semiconductor engineering and microelectronics). Kiev, Naukova dumka, 1966, 132-142

TOPIC TAGS: volt ampere characteristic, silicon diode, thin film circuit, semiconductor diode

ABSTRACT: The volt-ampere characteristics of a silicon diode with a metal-p-silicon contact are investigated experimentally. According to theoretical predictions, the volt-ampere characteristic is given by

$$I = I_s(e^{\alpha V} - 1), \qquad (1)$$

where

$$I_s = \frac{e p_p \bar{v}}{4} \bar{D}_p e^{-\frac{\varphi}{kT}}, \qquad (2)$$

and the parameter α is expressed by

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ACC NR: AT6034356

$$\alpha = \frac{\frac{e}{kT}}{1 + \frac{d}{\varepsilon_1}\left(\frac{2\pi p_0 \varepsilon_2 e}{\varphi_0 - eV_2}\right)^{1/2}}. \quad (3)$$

The experiments were carried out on diodes prepared from p-type silicon with an admixture of boron or aluminum with 0.08--0.007 ohm-cm resistivities. The diameter of the contact edge was 5--10 μ, and the contact pressure itself was kept at a constant level. The dependence of the parameter α on the following set of parameters was determined: thickness of the film; concentration of the charge carriers; the barrier height; and the temperature. The experimental scatter was of the order 20--30%. The results are shown graphically and compared with the theoretical predictions. It is found that the expression for α given above (3) is quite adequate. These results show that the diode theory that includes the gap between the metal and the semiconductor is applicable to the straight-line portion of the volt-ampere curves. Orig. art. has: 7 figures and 5 formulas.

SUB CODE: 09/ SUBM DATE: --Dec64/ ORIG REF: 008/ OTH REF: 007

Card 2/2

L 6798-65 EWT(1)/EWA(b) Pa-4 AMD/APGC(c) JK
ACCESSION NR: AP4039587 S/0016/64/000/006/0034/0037

AUTHOR: Strikhanova, Ye. V.

TITLE: Eradication of the goat-sheep type of brucellosis in Krasnodar Kray

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 6, 1964, 34-37

TOPIC TAGS: brucella, epidemic control, brucellosis, undulant fever, goat-sheep type of brucellosis, Krasnodar Kray, brucellosis mass vaccination program

ABSTRACT: Following the liberation of Krasnodar Kray in 1943 and the reevacuation of livestock from other areas, a significant increase in brucellosis was found in goats, sheep, cattle, and swine. The number of brucellosis cases for the human population of Krasnodar Kray also sharply increased with sheep being the main source of infection and cattle only a sporadic source. An extensive brucellosis control program was started in 1943 with emphasis on popularization of preventive measures among the population, training of medical and veterinary personnel, and special sanitary and veterinary measures to eradicate
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ACCESSION NR: AP4039587

the goat-sheep type of brucellosis. With the latter measures proving ineffective, all infected goats and sheep had to be slaughtered. Mass vaccination programs and protection of brucellosis-free farms have been largely responsible for reducing brucellosis in Krasnodar Kray. Since 1956 the number of brucellosis cases has been declining steadily with not a single case reported for 1959, 1961, and 1962. However, brucellosis cannot be completely eradicated in Krasnodar Kray until similar programs are adopted in neighboring areas. Orig. art. has: 1 table.

ASSOCIATION: Krasnodarskaya krayevaya sanitarno-epidemiologicheskaya stantsiya (Krasnodar Kray Sanitary-Epidemiological Station)

SUBMITTED: 01Apr63 ENCL: 00 SUB CODE: LS

NR REF SOV: 000 OTHER: 000

Card 2/2

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Experience in eradicating brucellosis of the goat-sheep type in the Krasnodar Territory. Zhur. mikrobiol., epid. i immun. 41 no.6: 34-37 Je '64. (MIRA 18:1)

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2. USSR (600)

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BUKHARIN,M., doktor tekhnicheskikh nauk; ZAKIN,Ya., kandidat tekhnicheskikh nauk; KORYUSHKINOV,S., shofer; STRIZMAN,I., inzhener; FEDOROV,S., inzhener; SHCHUKIN,M., kandidat tekhnicheskikh nauk

Experience in operating truck trains. Avt.transp.33 no.9:16-18 S'55. (MLRA 8:12)

(Motor trucks--Trailers)

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[illegible]

Examination of the parameter of prote[illegible] [illegible]
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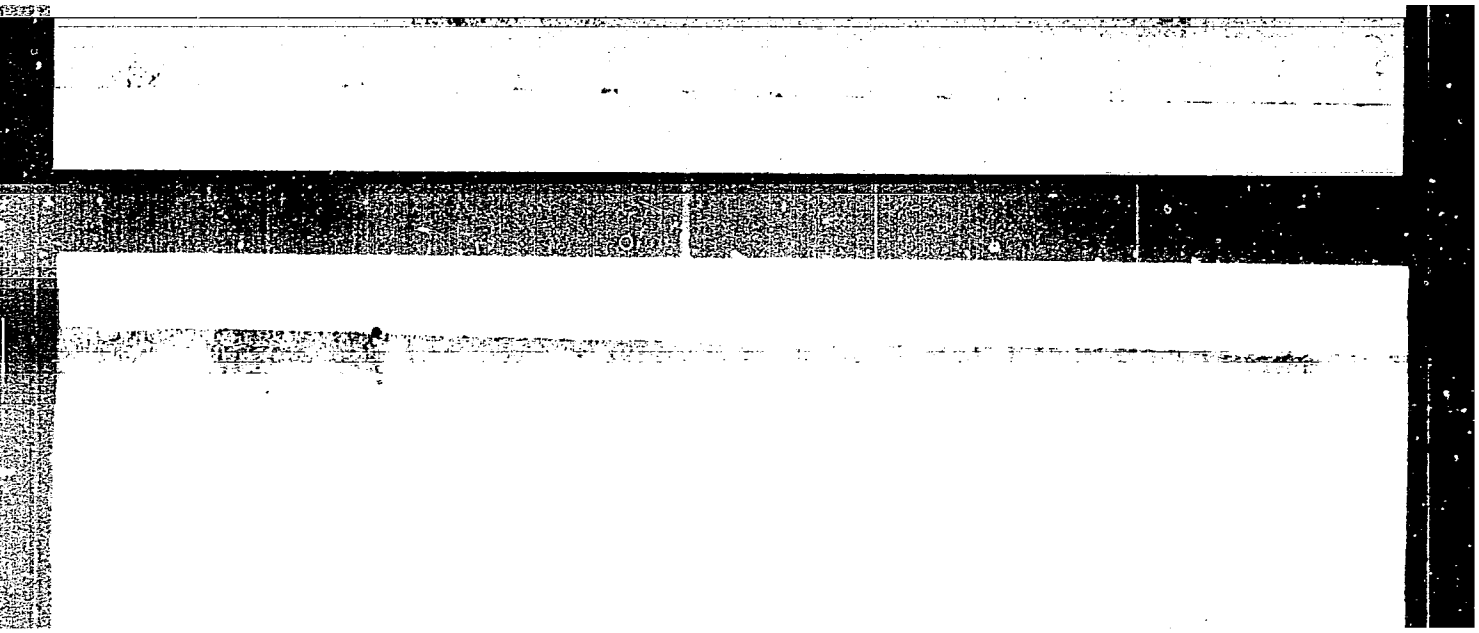
STRIKOVICH, M. A.

453. Styrikovich, M. A., Shitsman, M. E., and Miropol'skii, Z. L., [illegible] data on the temperature region of vertical boiler pipes [illegible] 1950 [illegible]

Experimen[illegible] temperatures and heat transfer [illegible] diam at pressures of 112 to 200 kg/cm² [illegible] heat inputs of [illegible] kg/m² sec. [illegible] temperatures [illegible] embedded in the [illegible] electric radiation heater which surrounded a [illegible]-mm length of tubing [illegible] determined [illegible]



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